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The Transformation of the Anti-NPP Movement in Taiwan after “3.11” Fukushima Daiichi Nuclear Power Plant Accident

福島第一原発事故後の台湾地域における反原発運動の性格変容

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【論文要旨】

台湾の反原発運動は1980年代から始まり、今日に至るまで実に30年以上続いている。本研究は、台湾における“3.11”後の政治的な反原発運動から、社会的な環境運動の一部としての反原発運動に至る過程を解明するものである。調査結果を踏まえれば、注目すべき点は三つある。第一に、台湾の反原発運動は、政党主導型の環境運動から市民主導型の環境運動へと転換した。第二に、ローカルな反対デモから生まれた反原発運動を導く理念は、その後の政党の政治活動の手立てになっており、環境団体は社会教育とデモを通じて反原発の主張を更に広げたが、これもまた政治的手段としても用いられた。第三に、反原発運動の主張は社会の民主化に向けた行動から生み出されているという特徴がみられる。つまり、反原発運動を通じて市民の権利を拡張しようとした捉えることができる。また、環境に対する危機感、あるいは市民的な民主化意識が反原発運動の動力になった。はたして、台湾における「原発ゼロを目標に掲げた反原発運動の登場」は、「原発事故から生まれた危機感という社会的な反応」とどのような関係にあるのかという点が問われなければならない。この問いに関する解明は、今後の課題である。

【Key Words】 NPO, NPP, citizen, environmental awareness, social awareness

1. Introduction

Since Japan's Fukushima Daiichi nuclear power plant disaster in 2011, there has been a protest every spring in Taiwan from the anti-nuclear power plant (anti-NPP) movement. 2013 and 2014 were the peak years of the movement. After 2015, the anti-NPP movement became a regular social movement in Taiwan. Most research talked about its connection with the Democratic Progress Party's (DPP=民進黨) development and gave an image that the anti-NPP movement is closely related with the DPP policy in Taiwan. However, the anti-NPP movement in Taiwan is also a grassroots movement. In fact, the anti-NPP movement did not start in 2011, but in the 1980s, already having thirty years of history that resulted from a growing awareness of environmental and social problems. Calling attention to the environmental risk of radiation from Nuclear Power Plants (NPPs) in Taiwan grew from a political tool for DPP, but lately it became a part of social consciousness by citizens' participation, political alienation, and the rise of various environmental non-profit organizations (NPOs).

It is very well known that the NPP problem is related to justice issues. An American scholar, Lawrence M. Friedman said, "Legal culture refers to the attitudes, ideas, opinions, and values about the law held by people in a society" (Friedman 1985:31). Based on this idea, Dr. Sherry Cable indicated that the rise of environmental injustice is the outcome of a new form of social control, which means the community-based grassroots environmental organization focuses more on local pollution and issues related to companies within communities. Environmental problems should not be criticized on the state level but on the local level calling for citizens to deal with contaminated communities independently and create an informal control system (Cable, 1993).

Taiwan's environmental movement started when the "martial law" was lifted in 1987, creating an "institutional vacuum", a lack of legal measures to solve environmental problems. A Japanese scholar Tadayoshi Terao used the term "self-relief" (自力救済運動) in his paper to describe the environmental movement during that time (Terao, 2002). On the one hand, the "self-relief" organization demanded the administrative system to take care of environmental problems. At the same time, democratization was promoted by the "self-relief" environmental movement. On the other hand, as the movement pursued quick compensation for victims, the outcome did not bring about change to social structure per se. Therefore, the "self-relief" (自力救済運動) environmental movement only had a transient balance of forces between victims and enterprises (Terao, 2002).

Another Taiwanese scholar Ho Ming-sho (2003) puts forward the term "party-dependent movement" for the early anti-nuclear power plant movement (anti-NPP) in Taiwan, "In Taiwan, the rise of anti-nuclear voice is closely related to the democratic opening". In the paper, the reason why

anti-NPP movements happened was bounded with party politics between DPP and KMT. “Protesters need the DPP’s political power to promote nuclear-free goals and the politicians need new ballots coming from social mobilization.” (Ho, 2003) It seems that the movements were strongly connected with the Democratic Progressive Party (DPP) government’s development. However, first of all, the anti-NPP might have happened and continued even without DPP’s support. Secondly, the anti-NPP movement did not obtain broad support from the public because they depended on DPP. Therefore, “Party-dependent movements” should be considered as interdependent movements. In addition, some protest organizers have a clear principle of keeping a neutral stance in politics. Some of these organizers base this on their own beliefs which differ from both the DPP and Kuomintang (KMT = 国民党, or Nationalist Party).

In fact, the KMT planned construction of the NPP4 in 1980 but the plan was strongly opposed by local residents. Also, the plan was suspended temporarily when Chernobyl accident happened in 1986. Despite local people’s anti-NPP wish and protests, NPP4’s construction restarted in 1999. When the DPP took the government in 2000 they suddenly stopped the NPP4’s construction plan without appropriate legislation process, which made the DPP lose credence in politics. In order to retrieve their damaged credits in the politic arena, the DPP allowed NPP4’s construction in 2001, which acutely disappointed citizens’ support. Since then, anti-NPP protests went down to the lowest level in Taiwan’s social movements. Although political factors on the nuclear power plant have been discussed a lot, the social aspect of the movement seldom was discussed. In fact, the public has been influenced in many ways by the anti-NPP movement and eventually became a momentous power that calling for safe future after 2011. How did it change and why? Where influences came from and brought to the public?

2. Qualitative and quantitative data

In order to understand the social aspects in anti-NPP movements in Taiwan, there questions are essential. They are: 1) how the public responded to Fukushima Daiichi nuclear power plant accident? 2) who lead anti-NPP movements move away from two parties’ arena? 3) Could anti-NPP movements in Taiwan connect to broader environmental movement globally? To answer the questions, first of all, data collection was conducted in 2017.

2.1. The two types of data

The data were collected quantitatively and qualitatively. The quantitative data came from questionnaire survey conducted in Japan and Taiwan in 2017. The data samples were collected through a web survey agency both in Japan and Taiwan, 508 samples by each. The qualitative data came from constructed interviews conducted to Taiwan’s environmental protection organizations, in

other words, non-profit organizations (NPOs). They are the Taiwan Environmental Protection Union (TEPU = 台湾環境保護連盟), Homemakers United Foundation (HUF = 主婦連盟環境保護基金会), Citizen of the Earth, Taiwan (CET = 地球公民基金会) and Green Citizen Action Alliance (GCAA = 綠色公民行動連盟). The interview was conducted in March 2017. Also, in October 2017, the author visited the HUF and the GCAA again for semi-constructed interviews to gather supplemental information.

2.2. Social consciousness towards radiation risk and the NPP project

NPOs have different ways of looking at this issue, however, the NPOs focusing on environment protection believe that most citizens disagree with the government on KMT's plan of implementing the fourth project (NPP4) and maintaining the other three NPPs. According to the data from "Japan, Taiwan and Korea's environmental consciousness questionnaire survey" conducted in 2017, the respondents from Japan and Taiwan hold opposite opinions with pre-assumptions. The pre-assumptions were that the Japanese worry more about radiation and food safety because its NPP disaster happened in Fukushima and the Taiwanese support a renewable energy plan since its annual anti-NPP movement and the DPP government declared a zero-NPP goal. However, the data that follows tells a different story:

As the data shows in Table 1: more Taiwanese worried about radiation and food safety after the Fukushima accident than Japanese did. Table 2: more Japanese wanted to reduce or stop NPPs

Table 1. Worry about the "Fukushima NPP accident" radiation contamination and food safety (%)¹

	TW	JP
WORRYING VERY MUCH	26.0	30.1
WORRIED	51.0	38.2
A LITTLE WORRIED	18.1	20.3
NOT WORRIED	4.9	11.4

Table 2. "What is your opinion on the electricity providing plan in 2025" (%)²

	TW	JP
SHOULD ADD ELECTRICITY PORTION FROM THE NPP	12.2	6.1
SHOULD STAY THE SAME ELECTRICITY PORTION FROM THE NPPS AS CURRENT LEVEL	20.3	12.0
SHOULD LOWER THE ELECTRICITY PORTION FROM THE NPPS COMPARING WITH CURRENT	36.4	33.7
SHOULD LOWER THE ELECTRICITY PORTION FROM THE NPPS DRASTICALLY	15.9	21.5
SHOULD STOP USING THE NPP	15.2	26.8

¹ The results of Chi-square test were as follows: TW d.f. = 3, F = 228.961, p < 0.0001; JP d.f. = 3, F = 82.693, p < 0.0001.

² The results of Chi-square test were as follows: TW d.f. = 4, F = 94.047, p < 0.0001; JP d.f. = 4, F = 124.874, p < 0.0001.

than Taiwanese did. However, we should notice that considerable Taiwanese respondents still support non-nuclear electricity, though not as many as Japanese.

On the one hand, the risk anxiety to radiation and food safety are more prevalent in Taiwan, not in Japan. Indeed, more Taiwanese worried about radiation and food safety than the Japanese did. On the other hand, the data about the attitude towards NPP's future is that Taiwanese people who want more NPP (12.2%) or want to keep the present amount (20.3%) are more than Japanese people. In other words, Japanese people who want to reduce the number of NPP (21.5%) or hope to stop all NPPs by 2025 (26.8%) are more than Taiwanese people. However, it is still noticeable that the rest of Taiwanese people (66%) agree with reducing electricity from NPPs in the future. It is clear that the NPP accidents that happened in Japan influenced the attitude to NPP in Taiwan. Also, the fact is that Taiwan's anti-NPP movements have continued since 1980s and have gathered more momentum from Fukushima's NPP disaster.

3. The brief history of democratization process and the anti-NPP movements in Taiwan

In Taiwan, the Democratic Progress Party (DPP) was established in 1986 and KMT's "martial law" ended in 1987. At that time, the Chernobyl NPP accident happened in 1986 and raised the global-wide anti-NPP movement, which opened a gate for Taiwan to promote their environmental issues through social movements. In addition, according to the memo from the interviews in this research, many of the organizers who led the anti-NPP movement studied environmental policy in the U.S. in the 1970s when American environmentalism was popular in the world. The knowledge mobilized them to deal with environmental problems in Taiwan.

The first environmental protection organization in Taiwan: the Taiwan Environmental Protection Union, shortened as the "TEPU", was founded in 1987, the final year of "Martial Law" and the second year of DPP's establishment. At that time, there was a social activist known for being against NPP who had a slogan which became famous in Taiwan, that is "anti-NPP is anti-dictatorship". According to Ho, it suggested Taiwan's democratic process and the implementation of citizens' rights (Ho, 2006).

Regarding the 1980s, the TEPU was established on the period when education to promote citizens' knowledge was highly valued while environmental problems were very serious in Taiwanese society. Taiwan is a multicultural island because of its residents and the history of being colonized twice by Netherland and Japan. So, besides its own original Chinese ethnic culture, it also has influences from Dutch and Japanese culture. Especially, the period of Japanese colonization influenced Taiwan's social class formation (Chen, 1979). Moreover, Taiwan includes four "ethnic"

groups defined by their races: original residential (also being called “Yuan Zhu-min” (原住民) or “Xian Zhu-min” (先住民) which means aboriginal residents), mountain people, Minnan (閩南) people (mainly came from Quanzhou and Zhangzhou, mainland China) and Kejia (客家) people (mainly came from Hong Kong). Meanwhile, The Minnan and Kejia people were further labeled into two groups based on their time of arrival. For example, they will be called, “Ben Sheng people” (本省人=host local resident) if they arrived in Taiwan before 1945 and will be called, “Wai Sheng people” (外省人=outside resident) if arrived after 1945 (Jiang, 1986). The multiple cultures and different races also developed a complicated society abound with confliction. Therefore, as Ho Ming-xiu pointed out that even though environmental pollution became a serious problem and formal or official articles pointed out the pollution and resource depletion problems from 1980, despite the government set an environmental perception bureau and a slogan calling attention to it in 1982, still very few citizens realized the environmental problems. (Ho, 2006) In fact, during that period, other social problems such as crime, violence and national confliction were much more severe than environmental problems for citizens (Hsiao, Zhang, etc, 1988). However, education holds significant value in society owing to the industrialization process and the need for social equality (Cai, 1988). Therefore, the TEPU’s establishment coordinated the need of education in the society which paved the way to educate environment knowledge and to raise public consciousness to the environment that followed.

4. NPOs’ characteristics and their anti-NPP strategies

Based on a series of interviews with the Taiwan Environmental Protection Union (TEPU) and three major anti-NPP organizations, the points are clear. Firstly, each organization has different objectives but they have been united regarding the anti-NPP issue. Secondly, the Green Citizen Action Alliance (GCAA) is an organization that used to be a part of TEPU but later became independent in order to keep the DPP’s political stance at a distance and to concentrate on the anti-NPP issue. Thirdly, their protests showed the anti-NPP movements not only strive for environmental democracy but also become dynamic by combining social consciousness to environmental consciousness. Moreover, CET used the term, “environmental (in) justice” to underline the rooted environmentally unfair situation between South and North Taiwan. Last but not least, the HUF and GCAA show the emergence of effective female attendance in anti-NPP movements.

4.1. TEPU – the first leader in environmental issues

The “Taiwan Environmental Protection Union” (“TEPU”) is the first environmental protection organization created by a group of professors who studied environmental policy in the United States in 1987. “In the wake of the nuclear disaster at Chernobyl and the end of decades of martial

law in Taiwan,” they have spearheaded the anti-NPP movement since 1988 and have led annual marches or protests against the existence of NPPs since 2011. The TEPU is especially concerned with the construction of the fourth NPP and contributed to the social consensus building against its construction. At present, the TEPU has 13 branches in Taiwan. Meanwhile, as the biggest environmental protection organization, the growth of the organization has a close relationship with the political development of the DPP. “*Our agenda is close with the DPP’s political belief,*” said an interviewee. The main members also expressed their political positions openly, calling themselves as a “knowledge building, action-oriented, grassroots” group to spread their environmental assertion and to have a significant influence on Taiwanese society through education, training, media, and so on.

Among many issues, energy transition issues have gained much attention because one of the DPP’s policies is to realize zero-NPP electricity before 2025. In order to make this idealism become a reality, the TEPU believes converting wind power and solar panel energy into electrical energy could be an effective way. To push the energy-transition project forward in Lukang (鹿港), they even plan to persuade and motivate monks within temples to accept solar panel energy as they believe Taiwan is a religious society, and in particular, Mazu, an another vernacular religion, has strong influences on the society. In addition, the TEPU took the leadership among international NPOs in elaborating and proposing policies on environmental and civil issues participating major forums such as No Nukes Asia Forum.

4.2. CET – a representative of environmental justice group in southern area

In 1998, a local organization named the “Kaohsiung Teacher’s Committee” was founded by an art teacher who cared about ecological education. In the same year, an international student network in the United States was founded by several international students from Taiwan, named the “Taiwan Environmental Action Association (TEAA).” In 2007, this art teacher created a new organization, “Mercy Earth Taiwan” (MET) because of a pollution problem caused by a coal-fired power plant in Kaohsiung. The organization wanted to call attention to this problem by informing the public about the pollution in south. In 2010, MET and the TEAA co-founded “Citizen of the Earth, Taiwan (CET)” based on the common concerns about three main environmental issues in Taiwan: land, environmental pollution, and energy transition issues. In CET projects, they use such terms as “environmental injustice” and “environment and social justice” to address the unequal land usage and pollution situation in the poor community. “*We use these words because we want citizens to know that in society, some people have made a special sacrifice for local or even national economic development. In other words, the state power suppressed those poor people*”. CET is the first environmental organization funded by the public in Taiwan. Meanwhile, their financial budget is

transparent on the internet. Specifically, the transparency allowed people to see how much funds the organization raises, where the money comes from, and how much they use on what purposes, creating a “fund map.”

CET used to use “mercy” in their previous name to emphasize their standpoint of being a part of the environmental problems. They wanted to show that they are sympathetic to the earth so they were calling for responsibility from industries and individuals. Their “environmental justice” ideas empowered citizens to be involved in policy making, to supervise the factories, and to speak out about their needs from environmental perspectives. They believe their activities are able to develop a process of environmental democracy, which is different from the political meaning of democracy. Besides the anti-NPP movement and environmental issues, CET also has been paying attention to energy transformation. After the “3.11” accident happened in Fukushima, CET was working with many organizations in Taipei. Furthermore, they built a platform on the internet called the “Nation-wide Demolish Nuke Action Platform.” More than 126 NPOs from north to south Taiwan participated in the platform.

Therefore, the shock from the “3.11” Fukushima accident and the eagerness of becoming nuclear-free energy systems from using NPP energy motivated the NPOs in Taiwan to start or continue the anti-NPP movement. Each NPO has different ideas, but all of them have one common issue, that is opposing the plan of using NPPs. Before the year 2011, the anti-NPP movement was an issue related to politics and democracy. However, the Fukushima disaster was a wakeup call to Taiwan. The confrontation with political ideology and technological dominance was eased by the fear of potential radiation risk from the NPPs and inspired stronger desire to stop using the NPPs in Taiwan. As an interviewee said, “*‘3.11’s accident shocked Taiwan because Japan is a technically well-developed country and it had such a big technology disaster. We don’t have an ability to prevent such disaster from happening in Taiwan.’*” Meanwhile, the public started to worry about the possibility of the occurrence of an accident equivalent to the Fukushima accident of 2011 in Taipei, because the geological area of Taiwan is much smaller than that of Japan but earthquakes occur as same frequently as Japan. The public was scared and felt their lives were threatened by the NPPs.

4.3. GCAA – a young and radical green leader

The “Green Citizen Action Alliance” (GCAA) was established in 2000. It was a branch of the TEPU in Taipei starting in 1992. At that time, a number of volunteers were graduate and undergraduate students who worked there and represented the TEPU to youngsters. However, the overlapping issues and the gap between the students and professors made the branch split from the TEPU and named themselves the GCAA. The earliest concern of the organization was house garbage and river pollution problems because Taiwan had a long history of dumping instead of burning

it and part of the waste was landfilled beside rivers. Then, the attention shifted to NPP's risk to society as well as energy substitution. However, now they especially focus on the environmental movement related to the anti-NPP movement and renewable energy issues. With the help of universities nearby, the volunteers made great contributions to the development of the organization. On the one hand, the GCAA's development has a hope of independence from politics and a hope to eliminate reliance on a party's success in the election. On the other hand, the organization wants to motivate ordinary citizens to support their idea of energy saving. The motivating strategies includes events, lectures, and arts. They only accept funding from citizens and small private companies' regular and irregular donations. The GCAA hopes to motivate the citizen actively participate in finding alternative resources too. "*Because Taiwan Power Company belongs to KMT, the energy power is not owned by the market but by a Party, so that set up a goal for energy saving, regulation and renewable energy to become self-sufficient on energy using*", an interviewee responded.

In Taiwan, the opposition of NPPs was a familiar topic to citizens, even during the lowest tide period of activity from 2000 to 2011. The anti-NPP issue is a representative topic to all the environmental organizations in Taiwan. In addition, most of workers and volunteers working for GCAA are young women. No matter they are graduate students or white-collars, they have a strong feeling that they have responsibility in environmental issues and they could change environmental future in Taiwan.

4.4. HUF – a representative for women

"We don't want women to become victims. We are actors. We can make things different. We are a solution."— by an interviewee from HUF

The "Homemakers United Foundation" (HUF) was established in 1986 and become a formal organization in 1987, almost one year earlier than the TEPU. Although most of them are wives of professors of Taiwan National University, most of them received training in the natural sciences as well. The wives started with the potential of the family believing that taking care of the community was an extension of taking care of their own families. Although the name of the organization in Chinese means "housewife", They do not call themselves housewives but "homemakers" to send a message to the society that they are not only housewives but they can make a difference in their community too. The organization placed a strong value on practical life. At the beginning stage, they cared about issues around food such as school meal safety and eco-friendly food. After 2000, in the second stage, they wanted to get involved more in public policy to support the DPP. In the third stage of development, the organization started to think ahead of policy, to educate the politicians about the environment in addition to some issues related to trade between countries. After 2007's American BSE beef problem, they started to distance themselves from the political arena. The

organization has three principles: 1) caring for the elderly 2) providing service to the community 3) giving a stronger voice to women.

They have been involved in environmental issues for food and electricity since 2011. The anti-NPP issue for the HUF is a principle issue because it is connected to their definition of contemporary society, including elder care, female empowerment, and community contribution. “*The elderly is sensitive to radioactivity, especially after 3.11,*” they said. Therefore, they monitor the food’s condition and quality, making sure the radioactivity of the food from Japan is more stringent than the standard set by the Taiwanese government. As far as gender is concerned, the HUF wants to make a change to the community through direct action by women. As the HUF wants women to learn science and technology, they teach the community how to check the level of radioactivity.

Also, NPP has a symbolic and practical significance in creating electricity and power for development. The HUF’s opinion towards the anti-NPP symbolically means to be independent as a citizen because NPP’s technology is not coming from Taiwan, but importing from other countries’ company, such as Japan, the US (Suzuki, 2014). The activists who had studied in the United States saw the anti-NPP movement as a wake-up call to intellectuals, but during the “martial law” period in Taiwan in the 1980s, economic development was the number one priority. Nonetheless, the HUF initiated the anti-NPP movement to caution society, and spread the idea. Currently, the fourth NPP is the most critical situation in Taiwan whose original construction plan was made by KMT at the end year of 1987. According to an interviewee in HUF, the reasons why they go against with NPP plan are: “*The seed of democracy and consciousness grew up with anti-NPP. Firstly, the idea of environmental protection and activity from the United States in the 1980s inspired those intellectuals, and they brought the idea when they returned to Taiwan. Secondly, the situation of Taiwan’s environmental pollution was very serious. Thirdly, the justice of environmental issue. We meet the right time when the environmental movement becomes institutionalized and legalized in Taiwan. Last, the fourth NPP employs technology from Japan too, some of the activists want to get rid of control from Japan while some activists against KMT want to stop the fourth NPP since the decision was made by KMT.*”

Therefore, anti-NPP means practicing democracy and gaining independence. The HUF’s autonomy principles also inspired women to contribute more to society. Japan’s “3.11” accident made them become very aware of the potential risk of NPP accidents in Taiwan. Anti-NPP means self-protection as well as a chance to express the idea that electricity can be self-reliant from NPPs through saving energy and using renewable energy.

5. On the side of society: public response and symbolic acceptance

5.1. The social response to women's role in the anti-NPP movement

Mothers play a gender role in protest activity and conduct civil rights by building up strong social capital in the anti-NPP movement (Phoebe, 2014). In Taiwan, the public supports mothers in anti-NPP activity. The basic public consensus comes from a common understanding of how hard it is to be a mother in a family while being a woman in the workplace. As a social movement, scholar Hank Johnston said, "Empathy earned social support through symbolic communication because between the democratic state and the social movement, there is a symbiotic relationship (Johnston, 2011)." In Taiwan's case, the social response was brought by communication in the anti-NPP movement, specifically, 1) slogans combined with celebrity images; 2) the social image of mothers and children; 3) symbolic hope for the future society.

"Mom loves Taiwan" is the name of an anti-NPP organization. The founder Irene Chen is a successful Fubon banker's wife in Taiwan. In traditional male-dominated culture, unlike other wives who keep away from husbands' work or only play a supportive public role, Chen stands out, with other celebrities, who created the anti-NPP process in December 2012. They created an alliance named "Mom loves Taiwan" to supervise the safety of the NPPs. In public, Chen is a celebrity and a banker's wife. However, she used the mother identity to promote her motivation of caring for the next generation. The public was impressed by her courage because she didn't retreat from her opposition to the close connection of banks with Taiwan Power Company. Despite the potential risk of destruction to her husband's business, the caring for future safety impressed the public. Meanwhile, she claimed that her husband supported the decision and showed his appreciation during an interview for the media "Taipei Times". The careful, supportive behavior consolidated the impression of a happy family in addition to their wealthy public image that had already existed. Furthermore, one of their children is a "special kid," who has had cerebral disease since he was born. Married couples and promising families are strong tools for convincing the public of a love and hope for children's health. Therefore, Chen's attitude to NPPs and her families' response deeply moved and created the image of a better and hopeful future based under a safe society without the NPPs.

For example, March 8th is International Women's Day, but during a protest the day before, activists held the photos of children who suffered from the Chernobyl accident. They said, "We want children, not nuclear." In Chinese, the characters are "要孩子, 不要核子." The slogan in the Chinese characters has a similar expression and pronunciation but different meaning, for example, "核" means "nuclear" and "孩" means "child". The slogan has two meanings. One is a lesson learned from the tragedy caused by radioactivity. The other is the hope for the future and the next

generation without nuclear power plants. This slogan was supported by many mothers and their families. Especially, pregnant women posted their photos with the slogan to support the claim. The hope of the family and pregnant women amplified the speed of spreading the social consciousness of the anti-NPP movement leading to the public to start thinking that anti-NPP is a justice cause.

5.2. The slogan of “Fei He Jia Yuan” (a nuclear-free homeland)

The DPP’s government declared the slogan of “Fei He Jia Yuan”, which means a nuclear-free homeland. “Fei He Jia Yuan” in Chinese characteristics are “非核家園”. “非核” means “no nuclear” and “家園” means “homeland.” The slogan plays a critical role in recalling the common understanding of the home in Taiwan. Presently, the image of the family and the home in Taiwan’s collective memory is being changed because of the mixture of indigenous people, local people, immigrants, people who lived under Japanese colonization, and war survivors.

“家園” is pronounced, “Jia Yuan” in Chinese. In general, “Jia Yuan” in Chinese means a home for a family and concerning geography, the meaning is related not only to one living room or one house but also with a common space such as a yard which can be shared with neighbors. Meanwhile, daily activities or some small events can be held in a shared place.

The slogan of “Fei He Jia Yuan” calls memory of the traditional Taiwan. Based on Japanese scholar Seitaro Maeno’s research in Taiwan, since the 1960s, large yards have been dwindling away with the modernization process in Taiwan. A number of residential communities containing several families sharing a common yard has already disappeared. Meanwhile, the concept of the home changed from the 1960s too. In the past, families were living together and managing a whole family’s finance. Also, the family was distributed from the male lineage when the size of the family was too big. However, at present, even the family’s finance still is regarded as a common capital of the family, the family has already been separated because from the 1970s urbanization rapidly started in Taiwan and many young people moved out from their hometown or were living outside of the town (Maeno, 2015). At present, the homeland is not only defined as an ideal image but also relates to the memory of the traditional form of the home. In Taiwan, sons-in-law or remarried widows can also be included in the home or in charge of the home too. Therefore, the “Jia Yuan” has more of an equal and harmonious meaning in Taiwan. Thus, combining with the collective memory of the “Jia Yuan” and the present home images, the slogan of “Fei He Jia Yuan” raised many sympathetic reactions in the society of Taiwan. Also, it refers to, “family with a community” to express the blueprint of life without NPPs in the future.

In Taiwan, the anti-NPP movement’s slogan gathered the public support from environmental aspect and social aspect. So far, slogans from the anti-NPP movement in Taiwan have been discussed. It is very clear that the symbolic meanings of the movement gained a lot of support from

the public because those slogans are related to the citizens' experiences, memories, and hopes for the future. It has been highlighted that the anti-NPP movement is not confined in the scale of environmental problems in Taiwan. In fact, it has been woven into social issues because of the citizen's experience and participation.

5.3. Public environmental education

Taiwan's public education plays an important role in environmental opinions spreading in society. There is a paper (Hsiao, 1999) that pointed out that the forming of environmental consciousness in Taiwan used the publications and speeches of intellectuals because the ideas related to the pollution, education, policy-making, and technology gave rise to the public awareness of environmental issues. Meanwhile, the press and newspapers played a critical role in spreading the idea of intellectuals. In Taiwan, education is recognized as an important tool for success and studying abroad is highly appreciated in Taiwanese society. Many of the TEPU's volunteers who gave an open speech or wrote a column in a magazine about environmental pollution were studied in the US during the 1960s or 1970s, a time when the US was at the peak of its environmental movement. Also, they supported the idea that environmental rights are a part of human rights so that the citizens have the right to oppose the NPP's construction plan if they do not want it. For example, the local residents of Gongliao (貢寮) opposed the fourth NPP's construction plan.

The knowledge shared by those Taiwanese scholars paved the way for environmental awareness for citizens. Therefore, although the anti-NPP movement was in a frozen period because of the DPP's policy failure and KMT's resumption plan to construct the fourth NPP from 2000 to 2010, the anti-NPP movement still remains in lectures and articles. For that reason, many citizens opposed using the fourth NPP and supported the plan to stop using NPPs by participating in marches and rallies shortly after the Fukushima nuclear power plant accident happened. The educated public created an opportunity for the anti-NPP movement from the support of citizens.

5.4. The process of combining social consciousness to environmental consciousness

The risk awareness of NPPs and the anti-NPP movement in Taiwan changed from being an environmental issue to becoming a social issue owing to NPOs' endeavors. The perception of environmental risk includes cognitive, evaluative, and symbolic frames (Terada Ryoichi, 2016). In Taiwan's case, despite environmental education, the evaluative frame also contributes to motivation of protests. For instance, the TEPU is involved with educational activities, the HUF and the GCAA represent gender equality and citizen's right, and CET is focusing on environmental justice. All the efforts show that the citizens' opinions are representable and valuable to future decisions about NPPs. As for the symbolic frame, religious values in Taiwan, the justice image of the TEPU, and the justice image of CET motivated the anti-NPPs activity. These ideas connect environmental

issues to social consciousness. At the same time, the movement made the NPP issue shift from a political agenda to social awareness in Taiwan.

6. Conclusion

The anti-NPP protests in Taiwan were triggered by the “3.11” accident but multiple reasons contributed to it happening. Political reasons gave a good explanation of why the anti-NPP movement happened before the year 2000, the year that marked the DPP’s failure gaining anti-NPP support. However, the social response made important contributions to the opposition of NPPs after 2011. Sharing ideas such as “environmental justice”, “social justice” or “injustice”, NPOs’ activities and support from the public laid the foundation for future environmental negotiation in Taiwan. Also, environmental awareness shifting to social awareness about the NPPs played a significant role after the year 2000.

On the one hand, NPOs’ strategies came close to the social level and were enlarged by public support and inspired the morality and responsibility of citizens. The TEPU made efforts on educating the public on knowledge related to the environment. Now, they are also using religion, such as Mazu to convince the public to use green energy. The HUF played a role in encouraging women to participate in energy decisions. GCAA are motivating citizens by conducting anti-NPP and working on a solid energy transformation plan. Also, after 2011, CET added southern Taiwan’s network of anti-NPPs connecting to northern Taiwan’s anti-NPPs network. The online activity made the anti-NPPs movement becoming known on the society.

On the other hand, the anti-NPP plan is not just an environmental issue but also a complex social issue in Taiwan. Citizens echo with the slogans and symbols because they have accepted or have been influenced by the image of gender, justice, and citizens’ rights. They respond to NPOs and express their care about the future of Taiwan. In addition, environmental education is highly recognized in Taiwan so that ideas about environmental-friendly behavior becomes widely accepted in Taiwan area. Therefore, as the data showed, in Taiwan, people worried about radiation risk from NPPs since 2011 and the majority of people support a decrease on the dependency on electricity from NPPs. Also, Taiwan has an annual anti-NPP rally. However, how environmental perception has grown from social issues in Taiwan needs further research in the future.

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